

CLAIMS

1. Prefabricated, self-supporting, radiating panel with a sandwich structure, characterized in that said sandwich structure comprises a layer of plasterboard and a layer of heat-insulating material and in that the plasterboard layer incorporates, internally, at least one continuous pipe which is designed to form a hydraulic circuit and the end portions of which emerge from the panel.

2. Radiating panel as claimed in Claim 1, wherein said plasterboard layer comprises a plurality of said continuous pipes each housed in adjacent modular zones of the panel, said zones being separable from one another so as to provide panel parts of different sizes in a modular manner.

3. Radiating panel as claimed in Claim 2, wherein said pipes have a coiled arrangement and said end portions emerge from the panel in a rear and lateral zone thereof.

4. Radiating panel as claimed in Claim 2, wherein said modular zones have a symmetrical arrangement with respect to a middle axis of the panel.

5. Radiating panel as claimed in Claim 4, wherein said modular zones extend, arranged above one another, parallel to the short side of the panel.

6. Radiating panel as claimed in Claim 4, wherein the lines separating adjacent modules are highlighted on the external surface of the panel by means of scoring or colouring obtained by means of silk-screen printing, adhesive tapes and the like.

7. Radiating panel as claimed in Claim 3, wherein the width of the heat insulating layer of the panel is less than the width of the plasterboard layer by an amount sufficient to allow said end portions to emerge freely from the plasterboard layer and allow direct fixing of the plasterboard panel

to supporting sections.

8. Radiating panel as claimed in Claim 2, comprising moreover two transverse facing end strips, which are devoid of pipes and insulating layer, for housing the lines supplying the thermal carrier fluid behind the panel.

9. Radiating panel as claimed in Claim 2, wherein said pipe is a pipe made of plastic material.

10. Radiating panel as claimed in Claim 9, wherein said pipe comprises a continuous metal wire incorporated in the wall of the pipe.

11. Radiating panel as claimed in Claim 2, wherein said pipe is a pipe made of metallic material and preferably stainless steel.

12. Radiating panel as claimed in any one of the preceding claims, wherein said layers of the panel are fixed together by means of gluing.

13. Method for manufacturing a radiating panel as claimed in any one of Claims 1 to 12, comprising, during manufacture, the steps of:

a) milling one or more coiled cavities on one side of a plasterboard panel;

b) inserting into said cavities a continuous piping, the end portions of which emerge in a rear lateral zone of said panel;

c) sealing said piping inside said cavity using a heat-conducting sealing material;

d) gluing onto the abovementioned side of the panel a layer of heat insulating material; and, during manufacture or installation, the step of:

e) cutting said piping at the piping lengths connecting one cavity to the adjacent cavity.

14. Method for manufacturing a radiating panel as claimed in any one of Claims 1 to 12, comprising the steps of:

a) forming a plasterboard panel by inserting inside the gypsum core thereof one or more coiled pipes, the end portions of which emerge from a

rear lateral zone on one side of said panel;

b) gluing onto the abovementioned side of the panel a layer of heat insulating material.

15. Radiating panel formed by a plurality of panels as claimed in any one of Claims 1 to 12, characterized in that said panels are arranged alongside one another such that pairs of neighbouring panels are adjacent along the sides which do not have the end portions of the pipes and instead are separated from one another, along the sides provided with the said end portions, by a predetermined distance sufficient to allow the insertion, between the panels, of secondary headers which are connected to said end portions.

16. Radiating panel as claimed in Claim 15, which is fixed to pre-existing masonry walls or ceilings by means of interposed metal support sections with a square or U-shaped cross-section along the line joining together adjacent panels and metal support sections with an Ω -shaped cross-section along the strip joining together non-adjacent panels.

17. Radiating panel as claimed in Claim 16, wherein said secondary headers are housed in said metal sections with an Ω -shaped cross-section, where they are connected to said end portions of the coiled pipes.

18. Radiating wall as claimed in Claim 16, which also comprises main supply lines for supplying thermal carrier fluid to said secondary headers, which are housed behind the panels along the strips of said panels which do not have said heat insulating layer.

19. Radiating panel as claimed in Claim 16, also comprising, along said Ω -shaped metal sections, a plasterboard covering panel.